

I. RHYNCHOTA FROM BARKUDA ISLAND.

By C. A. PAIVA, *Assistant, Zoological Survey of India.*

INTRODUCTORY NOTE.

I have already described Barkuda I. in these "Records."¹ Here it will be sufficient to repeat that it is a rocky or rather stony island about one mile long by three-quarters of a mile broad, and lies, about a mile offshore, in the Chilka Lake some five miles from the southern end. It is thus situated in the extreme north-eastern corner of the Madras Presidency, in the Ganjam District.

The peculiar features that have influenced its Rhynchotal fauna may be considered a little more fully. The most important of these is the sclerophytic nature of the vegetation. The island is rather densely wooded, but all the trees and bushes have hard glossy foliage, and ordinary succulent vegetation is practically confined to a few creepers and one or two weeds that have established themselves at spots where the jungle has been felled. With these facts is correlated a great scarcity of the smaller Homoptera such as abound in grass and among soft herbage. Indeed, all those species of either Homoptera or Heteroptera that live by sucking leaves or stems of plants are very scarce, the few that occur being found mainly on introduced Leguminosae. The phytophagous species of the island live in most instances by sucking seeds or berries, but the most conspicuous form (*Empysurus johni*) sucks the fruit and young leaves of a fig, and the most abundant (*Petalocnemis obscura*) the stems of the Poison Apple *Datura stramonium*, Linn.,—both plants that are not as a rule attractive to insects. Other groups of insects, with the exception of certain families of beetles, notably the Tenebrionidae and Cicindelidae, are just as poorly represented on the island as the Rhynchota. A factor that may have been of importance in the scarcity of species is the strong breeze that blows across the island almost daily. Insectivorous birds and lizards are, however, few.

There is a small pond in the middle of the island. It is dug in laterite rock and the water has a depth of about five or six feet in the middle, but naturally varies with the rainfall. The pool is roughly circular and about 12 yards in diameter. The bottom is covered with black mud. There are no true water-plants, but a fairly dense growth of sedges springs up round the margin in wet weather. The water is very slightly brackish, opaque and muddy. In this pond certain aquatic Rhynchota abound. The commonest are *Anisops sardea* and *Plea palescens*; other species are much less so. The Hydrometridae are as a rule scarce, but *Gerris tristan*, though not always present, sometimes appears in considerable numbers. Apart from Rhynchota and water-beetles, of which a certain number of species are abundant, the fauna of the pond is by no means rich. The only vertebrate is the frog *Rana*

¹ *Rec. Ind. Mus.* XIII, p. 171 (1917).

cyanophlyctis, which breeds there, the only molluscs are *Planorbis exustus*, which is abundant, and *Limnæa ovalis*, which is scarce. A few Chironomid and Culicid larvae occur, and a water-mite, parasitic in its younger stages on *Ranatra*, is common. In the latter part of the "rains" the rocks near the edge become covered with a sponge (*Spongilla alba*)¹ and a Polyzoon (*Plumatella longigemmis*).²

The collections on which these notes are based were made on seven different visits to the island, some of which lasted for a week or more, between 1914 and 1917. They were obtained by different members of the Zoological Section of the Indian Museum, now the Zoological Survey of India. The most lengthy of our visits, which took place at all seasons, were made in July and the first week of August, that is to say, in the earlier part of the "rains," which is thus the season best represented in the collection; but there is comparatively little seasonal variation in the insect life of the island, the climate of which, for purely local reasons, is more uniform than that of most places in Peninsular India.

I have added certain ecological notes to Mr. Paiva's manuscript. They are enclosed in parentheses.

N. ANNANDALE.

Director, Zoological Survey of India.

LIST OF SPECIES.

Fam. Pentatomidae.	<i>Harpactor squalus</i> , Dist.
<i>Coptosoma indicum</i> , Dist.	<i>Harpactor fuscipes</i> (Fabr.)
<i>Macroscytus subaeneus</i> (Dall.)	<i>Harpactor varians</i> , sp. nov.
<i>Cydnus varians</i> , Fabr.	<i>Sycanus collaris</i> (Fabr.)
<i>Empysurus johni</i> (Oshan.)	Fam. Nepidae.
Fam. Coreidae.	<i>Laccotrephes griseus</i> (Gucr.)
<i>Petalocnemis obscura</i> (Dall.)	<i>Ranatra</i> ? <i>filiformis</i> , Fabr.
<i>Homococerus albivittulus</i> , Stål.	Fam. Belostomatidae.
<i>Pendulinus antennatus</i> (Kirby).	<i>Sphacrodema molestum</i> (Duf.)
<i>Eusthetus insularis</i> , sp. nov.	Fam. Notonectidae.
Fam. Lygaeidae.	<i>Anisops surdea</i> , Herr.-Schäff.
<i>Aspilocoryphus guttiger</i> (Dall.)	<i>Anisops niveus</i> (Fabr.)
<i>Dicuchus femoralis</i> , Dohrn.	<i>Plea pallescens</i> , Dist.
<i>Nysius ceylanicus</i> (Motsch.)	Fam. Corixidae.
Fam. Pyrrhocoridae.	<i>Micronecta dione</i> , Dist.
<i>Scantius forsteri</i> (Fabr.)	Fam. Cicadidae.
Fam. Hydrometridae.	<i>Terpsosia jenkinsi</i> , Distant, var
<i>Mesorelia mulsanti</i> , Buch. White.	Fam. Fulgoridae.
<i>Mesorelia diluta</i> , Dist.	<i>Dicheptera kyalinata</i> (Fabr.)
<i>Gerris tristan</i> , Kirk.	Fam. Membracidae.
Fam. Reduviidae.	<i>Leptocentrus substitutus</i> (Walk.)
<i>Bagauda splendens</i> , Dist.	<i>Coccosterphus minutus</i> (Fabr.)
<i>Petalochirus burmanus</i> , Dist.	Fam. Jassidae.
<i>Acanthaspis fulvipes</i> (Dall.)	<i>Thomsoniella porrecta</i> (Walk.)
<i>Ectomocoris cordiger</i> , Stål.	<i>Eutettix phycitis</i> , Dist.
<i>Harpactor marginatus</i> (Fabr.)	

¹ See Annandale, *Mem. Ind. Mus.* V, p. 25 (1915).

² See Annandale, *Rec. Ind. Mus.* XI, pp. 166, 168 (1915).

Family PENTATOMIDAE.

[The members of this family, except *Empysurus johni* (Oshan.), are all very scarce on the island. I have occasionally seen *Macroscythus subaeneus* (Dall.) on the wing a few inches above the ground. In flight it closely resembles beetles of the family Histeridae.]

Coptosoma indicum, Distant.

1902. *Coptosoma indicum*, Distant, *Faun. Brit. Ind. Rhyn.* I, p. 33.

Barkuda, 21-vii-14.

Originally described from Point de Galle, Ceylon. Represented in the collection of the Zoological Survey of India from Calcutta; Medha, Yenna Valley, Satara district, ca. 2,200 ft., Bombay Presidency; and Vizagapatam, Madras Presidency.

Macroscythus subaeneus (Dall.)

1851. *Aethus subcæneus*, Dallas, *List Hem.* I, p. 116.
 1866. *Macroscythus javanus*, Mayr, *Verh. zool. bot. Ges. Wien.*, p. 361.
 1867. *Aethus æqualis*, Walker, *Cat. Het.* I, p. 159.
 1868. *Aethus indicus*, Vollenhoven, *Faun. Ind. Néerl.* I, p. 17.
 1874. *Macroscythus japonensis*, Scott, *Ann. Mag. Nat. Hist.* (4) XIV, p. 294.
 1893. *Macroscythus javanus*, Lethierry and Severin, *Cat. Gen. Hem.* I, p. 71.
 1893. *Cydnus subaëneus*, Lethierry and Severin, *tom. cit.*, p. 68.
 1899. *Macroscythus subaëneus*, Distant, *Ann. Mag. Nat. Hist.* (7) IV, p. 222.
 1902. *Macroscythus subaëneus*, Distant, *Faun. Brit. Ind. Rhyn.* I, p. 96.

Barkuda, at light, 20—21-vii-14, 25-vii—4-viii-17.

Recorded by Distant from Bombay; Deccan; Burma; Karennee, Katha, Schwego-Myo, Palon; Tenasserim; Thagata, Kawkareet. Widely distributed throughout the Malay Archipelago and found in Japan (*Distant*.) Represented in the collection of the Zoological Survey of India from Gopkuda Island, Chilka Lake.

Cydnus varians, Fabr.

1803. *Cydnus varians*, Fabricius, *Syst. Rhyng.* p. 187.
 1860. *Aethus cyrtomenoides*, Dohrn, *Stett. ent. Zeit.* XXI, p. 400.
 1868. *Aethus varians*, Stål, *Hem. Fabr.* I, p. 6.
 1882. *Cydnus varians*, Signoret, *Ann. Soc. Ent. France* (6) II, p. 155, t. vi, f. 92.
 1902. *Cydnus varians*, Distant, *Faun. Brit. Ind. Rhyn.* I, p. 92.

Barkuda, vii-14 and 25-vii—4-viii-1917.

Recorded from Bengal; Bombay; Ceylon; Burma; Mandalay; Tenasserim. Represented in the collection of the Zoological Survey of India from Habarane, Ceylon.

Empysurus johni (Oshan.)

1907. *Mussaфра johni*, Oshanin, *Ann. Mus. Zool. Acad. Imp. Sci. Pétersb.* XII, p. 416.
 1908. *Empysurus johni*, Distant, *Faun. Brit. Ind. Rhyn.* IV (Appendix), p. 460, text-fig. 272.

Barkuda, 17-vii-14, 15—22-vii-16, 25-vii—4-viii-17.

[This species is by no means uncommon on the island. It is gregarious in habits and feeds on the fruit and young leaves of the fig *Ficus Rumphii*, Bl., on which small companies of young and adults together may often

be discovered. The flight, though by no means strong, is less weak than might be expected from the shape of the body. Even females fly readily from tree to tree. The natural colour, though not the shape, closely approaches that of the young leaves on which the insect feeds. The colour in life is pale leaf-green; antennae (except the base of the first joint), eyes and ocelli brick-red; tarsi tinged with brown, a brownish blotch on the dorsal surface of the 2nd joint of the 2nd and 3rd tarsi; claws white at the base, black at the tip; membranous part of the hemelytron colourless, transparent; edge of abdomen dark brown, a reddish-brown line along lower surface of rostrum.]

In addition to the above characters it may be mentioned that there is a distinct tubercle within each posterior angle of the pronotum; of the two black lines which are mentioned in the original description as bordering the inner and outer margins of the lateral gutta of the connexivum, the one on the inner border is very faint and sometimes entirely absent. The anal appendage of the male is almost pentagonal in shape, the anterior, lateral and posterior angles being rounded; it is inserted at the apex of the deeply cleft apical margin of the sixth abdominal segment; it is deeply excavate dorsally and slightly convex ventrally. The male is much smaller and narrower than the female, the sexes being respectively 22 and 26 millim. in length and 14.5 and 18 millim. in greatest breadth.

In the earlier stages the dorsal surface of the thorax and abdomen is marked with some irregular patches of bright red. A distinct narrow black border runs along the external margins of the head, thorax and abdominal segments. This species was originally described from Kandy, Ceylon, and was not previously represented in the collection of the Zoological Survey of India. It does not appear to be represented in the British Museum collection.

Family COREIDAE.

[In this family again only one species is common, namely *Petalocnemis obscura* (Dall.)]

Petalocnemis obscura (Dall.)

1852. *Acanthocoris obscura*. Dallas, *List Hem.* II, p. 518.

1902. *Petalocnemis obscura*, Distant, *Faun. Brit. Ind. Rhyn.* I, p. 386.

Barkuda. 17-vii-14. 25-vii—4-viii-17.

[This species is by far the commonest bug on the island. It resembles the Malayan *Acanthocoris scaber* (Linn.) in habits, feeding on the poison apple *Datura stramonium*, Linn. The eggs are laid on the lower surface of the leaves in batches of from 17 to 42. Several females usually lay together or in succession, and the young insects of different clutches mingle in a common crowd. Shortly after hatching they migrate as a rule to the stems of the plant, on which they crowd together. Both adults and young in different stages may be discovered in a single crowd. Owing to their mottled colouration they are by no means conspicuous in the broken shadows thrown by the leaves of the plant.]

In the description of the species the dilatation of the apex of the 3rd joint of the antennae has been omitted. This is visible only when

the insect is viewed from the side, as the dilatation is vertical. In the earlier stages the insect is of a very pale colour, with only a few brown markings on its dorsal surface; the dilatation of the 3rd joint of the antennae does not become apparent till about the last but one moult.

It has been recorded from North Bengal; Khasi Hills; Bombay; Poona; and Ceylon. It was not previously represented in the collection of the Zoological Survey of India.

Homoeocerus albiguttulus, Stål.

1873. *Homoeocerus albiguttulus*, Stål, *En. Hem.* 111, p. 61.

1902. *Homoeocerus albiguttulus*, Distant, *Faun. Brit. Ind. Rhyn.* I, p. 361.

Barkuda, 25-vii—4-viii-17.

I have compared the only specimen from Barkuda with some specimens of this species in the collection which have been identified by Distant and I find they agree almost exactly in structure. The only very marked difference is the size of the pale luteous spot at the inner angle of the corium, which in the typical form is transverse and broadly margined posteriorly with piceous, while in the Barkuda specimen it is much smaller, being confined to the subquadrate cell of the corium, and without any piceous margin posteriorly. Antennae pale ochraceous with the basal joint greenish ochraceous and the apical half of the distal joint faintly brownish ochraceous. Apical area of the head also tinged with green. Pronotum thickly covered with minute brown punctures, those near the margins being smaller and paler; the anterior and lateral margins greenish, the posterior margin pale ochraceous, impunctate, and the posterior pronotal area obscurely transversely striate. Scutellum ochraceous, rugosely, transversely striate, sparingly punctured, its apex pale and impunctate. Hemelytra ochraceous with the punctures on the clavus arranged almost in regular lines. Underside greenish ochraceous. Length 19 mm., breadth 5 mm. The green colouration in specimens of this genus invariably fades, becoming pale yellow or ochraceous.

Recorded from Sikkim; Khasi Hills; Sibsagar; Burma; Ruby Mines, Karen-ni, and Palon. The type was described from Cochin China; Mr. Distant possesses specimens from the Malay Peninsula and Sumatra.

The specimens in the collection of the Zoological Survey of India are from Sikkim; Arakan; Sibsagar; and Soondrijal, Nepal Valley.

Pendulinus antennatus (Kirby).

1891. *Homoeocerus antennatus*, Kirby, *Journ. Linn. Soc. Zool.* XXIV, p. 90, pl. iv, f. 6.

1902. *Pendulinus antennatus*, Distant, *Faun. Brit. Ind. Rhyn.* I, p. 389.

Barkuda, 25-vii—4-viii-17.

A specimen of this species in the collection of the Zoological Survey of India from Kandy, Ceylon, is identical with the Barkuda specimen, but as members of this genus also have a tendency to lose their natural colour, if preserved dry for any length of time, a few remarks may be made on the colouration of a comparatively fresh specimen. The first, second and third joints of the antennae are olivaceous green, thickly covered with numerous minute black dots, the "ring" at the base of the

third joint is very pale green without any black dots, the fourth joint is reddish-brown with a broad pale basal band. The anterior area of the pronotum, besides having four black dots, has also a distinct black, transverse, irregular fascia. The membrane is shining hyaline, but appears to be fuscous, when at rest, on the dark dorsal surface of the abdomen.

Recorded only from Ceylon.

***Eusthetus insularis*, sp. nov.**

Described from a single specimen taken at Barkuda on 20-vii-1914.

Head black with the lateral lobes, apex of central lobe, an irregular transverse band between eyes, a rather broad band bordering the inner margins of the eyes and extending posteriorly to the basal margin of the head, a linear longitudinal streak between the ocelli and a somewhat broad, medially interrupted fascia on each side of the head, below the antennae and the eyes, brownish ochraceous. Antennae light brown with the apices of the first, second and third joints narrowly piceous; first and third joints subequal in length, second shortest, about half the length of the fourth, which is longest; some short stiff black bristles on the first, second and third joints. Underside of head with a broad central, longitudinal, shining black fascia. Rostrum with the basal joint incrassate, black, the remaining joints brown, with the apical half of the last joint piceous. Rostrum reaching the middle of the mesonotum.

Pronotum brown with three discal, longitudinal, piceous bands, of which the central is broadest, and most distinct. Anterior area with a shallow transverse depression a little behind anterior margin, covered with short silky hairs and with a short, longitudinal, ochraceous line; posterior area slightly raised, with numerous, small, black punctures on disk. Anterior angles rounded, posterior angles acute; posterior margin concavely sinuate before scutellum, obliquely ascending at the sides. Scutellum black, with a central longitudinal line and the apex broadly luteous; disk with some rather long, decumbent hairs. Hemelytra very dark brown, thickly punctured with black; a few linear spots on disk of corium a little beyond middle, luteous; costal margin paler; membrane fuscous, thickly speckled with greyish-white.

Underside shining black, clothed with very fine silvery hairs, which are most dense on the sides of the sternum; a large patch on each lateral area of the prosternum, the apices of the coxal cavities, a spot on the anterior margin of the mesosternum, the lateral and basal margins of the metasternum, a broad oblique lateral fascia on each side of the third abdominal segment and a small spot at the external basal angle of the fourth segment, luteous. Abdomen above black, with a broad longitudinal reddish ochraceous band extending from the basal segment to the apex of the fifth segment, the apical margin of the fifth segment narrowly and the centre of the remaining segments luteous; connexivum black and luteous alternately, the luteous markings less distinct on the underside of the fifth and posterior segments.

Legs ochraceous above, thickly mottled with black, underside of femora blackish; apices of tibiae and tarsi black; intermediate and

posterior femora black with a subapical pale annulation; apices of intermediate femora luteous. Length 10.5 millim.

Type No. 7242/H.I. in the collection of the Zoological Survey of India.

Family LYGAEIDAE.

Aspilocoryphus guttiger (Dall.)

1852. *Lygaeus guttiger*, Dallas, *List Hem.* II, p. 574.

1904. *Aspilocoryphus guttiger*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 11.

Barkuda, 13—18-iv-14, 25-vii—4-viii-17.

[Single individuals of this species are not infrequently seen on the ground in the more open parts of the jungle.]

Recorded from North Bengal. Represented in the collection of the Zoological Survey of India from Calcutta; Ranchi; Dharampur (under stone), ca. 5,000 ft., Simla hills; and Kufri, near Simla, W. Himalayas, 8,000 ft.

Nysius ceylanicus (Motsch.)

1863. *Heterogaster ceylanicus*, Motsch., *Bull. Soc. Nat. Mosc.*, p. 78.

1904. *Nysius ceylanicus*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 18.

Barkuda, 25-vii—4-viii-17.

Recorded from East Himalayas: Mungphu; Chota Nagpur, Ranchi; Ceylon. A very widely distributed species.

Dieuches femoralis, Dohrn.

1860. *Dieuches femoralis*, Dohrn, *Stett. ent. Zeit.* XXI, p. 405.

1872. *Rhyparochromus anticus*, Walker, *Cat. Hel.* V, p. 100.

1872. *Rhyparochromus siamicus*, Walker, *Cat. Hel.* V, p. 102.

1889. *Dieuches alternatus*, Horvath, *Termész. Füzetek*, p. 36.

1904. *Dieuches femoralis*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 84.

Barkuda, 25-vii—4-viii-17.

Recorded from Assam: Margherita, Naga Hills; Sikkim; Kashmir; Ceylon; Burma: Palon, Bhamo; Tenasserim, Malewoon; Batchian. Represented in the collection of the Zoological Survey of India from Siliguri, base of E. Himalayas, Bengal; Kurseong, ca. 5,000 ft., Darjiling district, and Pashok, 3,500 ft., Darjiling district, E. Himalayas.

Family PYRRHOCORIDAE.

Scantius forsteri (Fabr.)

1781. *Cimex forsteri*, Fabricius, *Spec. Ins.* II, p. 368.

1781. *Cimex clavimanus*, Fabricius, *Spec. Ins.* II, p. 368.

1822. *Lygaeus deustus*, Thunberg, *Hem. Rostr. Cap.* IV, p. 3.

1848. *Pyrrhocoris clavimanus*, Herrich-Schäffer, *Wanz. Ins.* VII, p. 102, f. 871.

1848. *Pyrrhocoris forsteri*, Herrich-Schäffer, *Wanz. Ins.* VII, p. 102, f. 872.

1860. *Dermatinus centralis*, Signoret, *Ann. Soc. Ent. Fr.* p. 952.

1865. *Scantius forsteri*, Stål, *Hem. Afr.* III, p. 10.

? 1873. *Scantius volucris*, Gerstaecker, in V. d. Decken's *Reise*, III, p. 413.

1904. *Scantius volucris*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 117.

1910. *Scantius forsteri*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 98.

Barkuda, 15—22-vii-16, 25-vii—4-viii-17.

[This species is entirely terrestrial in habits, hiding under stones and recumbent tree trunks.]

Recorded from ? Madras ; ? Coonoor ; Purneah, Bihar ; S. Africa ; Madagascar : Seychelle Islands. Represented in the collection of the Zoological Survey of India from Meerut, United Provinces of Agra and Oudh ; Purneah district, Bihar ; and on board ship off Coconada, Madras Coast.

Family HYDROMETRIDAE.

[*Gerris tristan*, Kirk., is the only species of this family that I have seen in large numbers on the pond in the middle of the island. It is not, however, a constant inhabitant, though it was common in July, 1916. I could not find a single specimen in July, 1917.]

Mesovelia mulsanti, Buch. White.

1879. *Mesovelia mulsanti*, Buchanan White, *Tr. Ent. Soc. Lond.*, p. 268.
 1884. *Mesovelia bisignata*, Uhler, in Kingsley's *Stand. Nat. Hist.* II, p. 273, f. 324.
 1893. *Mesovelia bisignata*, Uhler, *Proc. Zool. Soc. Lond.*, 1893, p. 706.
 1898. *Mesovelia mulsanti*, Champion, *Biol. Centr. Amer. Rhyn.* II, p. 123, pl. viii, ff. 10 and 11.
 1900. *Mesovelia orientalis*, Kirkaldy, *Ann. Mus. Civ. Gen.* XL, p. 808.
 1904. *Mesovelia mulsanti*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 169.
 1910. *Mesovelia mulsanti*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 137.
 1915. *Mesovelia mulsanti*, Annandale and Kemp, *Mem. Ind. Mus.* V, p. 181.

Barkuda, on pond in the middle of the island, 15—22-vii-16, 25-vii—4-viii-17.

Recorded from Bengal : Calcutta (at light), Port Canning (brackish pools), Rajshahi ; Puri, Orissa Coast ; Lucknow, United Provinces ; Peradeniya, Tangalla, Ceylon ; Sumatra ; also found in North and Central America, and in the Antilles. Represented in the collection of the Zoological Survey of India from Bengal : Calcutta and Port Canning. Orissa : Puri and Barkul. United Provinces : Lucknow. Kumaon : Naini Tal, ca. 6,400 ft. Madras : Ganta Sila hill near Rambha, Chilka Lake. South India : Bangalore. Tenasserim : Kawkareik, Amherst district. Andamans : Port Blair.

Microvelia diluta, Dist.

1909. *Microvelia diluta*, Distant, *Ann. Mag. Nat. Hist.* (8) III, p. 500.
 1910. *Microvelia diluta*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 139.

Barkuda, on pond in the middle of the island, 25-vii—4-viii-17.

Recorded from Calcutta and Rajshahi, Bengal, and represented in the collection of the Zoological Survey of India from Calcutta and Rajshahi, Bengal ; Lucknow, United Provinces ; Puri, Orissa Coast ; Rambha, Ganjam district, Madras Presidency.

Gerris tristan, Kirk.

1899. *Gerris tristan*, Kirkaldy, *Rev. Ent.* p. 88.
 1904. *Gerris tristan*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 179.
 1910. *Gerris tristan*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 144.
 1915. *Gerris tristan*, Annandale and Kemp, *Mem. Ind. Mus.* V, p. 182.

Barkuda, on pond in the middle of the island, 25-vii—4-viii-17.

Recorded from Bengal: Port Canning, Dhappa, near Calcutta, Rajshahi. Orissa: Sur Lake, Puri district. United Provinces: Naini Tal, Kumaon. Burma: Moulmein. Ceylon. Represented in the collection of the Zoological Survey of India from Bengal: Calcutta, Dhappa, Port Canning, Rajshahi, Berhampore Court. United Provinces: Naini Tal, 6,400 ft., Malwa Tal, 3,600 ft., Sat Tal, 4,500 ft., Bhim Tal, 4,450 ft., and Kathgodam, 1,200 ft., all in Kumaon. Orissa: Bhubaneswar, Barkul, Sur Lake, Puri district. Madras: on surface of Chilka Lake, among rocks at edge of Chilka Lake, base of Ganta Sila hill near Rambha.

Family REDUVIIDAE.

[All the members of this family found on the island are apparently of terrestrial habits and probably predaceous. None of them, however, are at all common, and in most cases only single specimens were captured.]

Bagauda splendens, Dist.

1906. *Bagauda splendens*, Distant, *Ann. Mag. Nat. Hist.* (7) XVIII, p. 364.

1909. *Bagauda decorus*, Breddin, *Ann. Soc. Ent. Belg.* 1909, p. 301.

1910. *Bagauda splendens*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 176.

Barkuda, 15—22-vii-16, 25-vii—4-viii-17.

Recorded only from Ceylon and not previously represented in the collection of the Zoological Survey of India.

[This species lives amongst vegetation at the edge of water.]

Petalochirus burmanus, Dist.

1903. *Petalochirus burmanus*, Distant, *Ann. Soc. Ent. Belg.* 1903, p. 55.

1904. *Petalochirus burmanus*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 242.

Barkuda, 15-22-vii-16.

Recorded from Burma, Bhamo, and not previously represented in the collection of the Zoological Survey of India.

Acanthaspis fulvipes (Dall.)

1850. *Platymeris fulvipes*, Dallas, *Trans. Ent. Soc. Lond.* 1850, p. 6, pl. ii, fig. 3.

1863. *Acanthaspis fulvipes*, Stål, *Ann. Soc. Ent. France*, 1863, p. 149.

1873. *Acanthaspis quadrinotata*, Walker, *Cat. Het.* VII, p. 175.

? *Acanthaspis quadristillatus*, Stål, MS.

1902. *Acanthaspis fulvipes*, Distant, *Ann. Mag. Nat. Hist.* (7) X, p. 183.

1904. *Acanthaspis fulvipes*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 259.

Barkuda, at light, 19-vii-14 and 15-22-vii-16.

Recorded from Bhutan; Sikkim; Sibsagar, Assam; East Bengal; and represented in the collection of the Zoological Survey of India from Bengal: Rangamati, Chittagong Hill Tracts; Darjiling district: Sukna, 500 ft., Sevoke, in stable at Kalijhora, Teesta Valley. Chota Nagpur: Ranchi. Assam: Cachar and Sibsagar.

On the 19th of September, 1916 the Rev. Dr. Sutherland of Kalimpong gave us a larva of a Reduviid bug covered all over with dust and dirt, which he had caught crawling about the floor of a stable at Kalijhora, on the Teesta-Kalimpong Road. It was kept alive in a breeding cage, being fed occasionally with small flies, chiefly Muscids. On the 1st of November it cast its skin. This probably took place during

the night, as when it was observed on the morning of the 2nd November it was seen to have covered its new skin with a very thick coating of dust and dirt, much thicker even than in its earlier stage. As the days went on, several dead flies, together with other rubbish, were found collected on the back of the bug, presumably placed there by it after it had sucked them dry. It was also noticed that it seldom attacked the flies by day unless it had had no food for several days. These bugs have a habit of seeking dark corners in houses and crevices in trees and probably never feed in bright sunshine. Our larva was, however, always on the alert during the day and when disturbed it would make a sudden dart from one place to another, remaining perfectly still for some time, thus giving itself the appearance of a piece of rubbish being blown about by the wind. It continued to add fresh rubbish to its cloak and thus seemed to grow bigger daily until it emerged as an adult on the 10th of March, 1917. It is probable that a whole year is occupied in its complete life-cycle.

The two cast skins and the adult are preserved in the collection of the Zoological Survey of India.

Ectomocoris cordiger, Stål.

1866. *Ectomocoris cordiger*, Stål. *Öfr. Vet.-Ak. Förh.* 1866, p. 256.
 1873. *Pirates adjunctus*, Walker, *Cat. Hel.* VII, p. 114.
 1902. *Ectomocoris cordiger*, Distant, *Ann. Mag. Nat. Hist.* (7) X, p. 283.
 1904. *Ectomocoris cordiger*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 295.

Barkuda. 15—25-vii-16.

Recorded from North Bengal; Sylhet; Bombay; Bor Ghát; Ceylon; Persian Gulf. Represented in the collection of the Zoological Survey of India from Bengal: Calcutta (at light), Madhupur (at light), Tinpahar, near Rajmahal. Behar: Purneah. Chota Nagpur: Ranchi and base of hills, Chakradharpur, Singhbhum district. United Provinces: Meerut, Almora, 5,500 ft., Kumaon. S. India: Nilgiris, 3,500 ft. Lower Burma: Kawkareik to third camp, Amherst district.

Harpactor marginatus (Fabr.)

1794. *Reduvius marginatus*, Fabricius, *Ent. Syst.* IV, p. 196.
 1874. *Chirillus marginatus*, Stål, *Ent. Hcm.* IV, p. 39.
 1881. *Harpactor marginatus*, Reuter, *Ac. Soc. Sc. Fenn.* XII, p. 293.
 1891. *Sycanus? militaris*, Kirby, *Journ. Linn. Soc. Zool.* XXIV, p. 119.
 1903. *Harpactor marginatus*, Distant, *Ann. Mag. Nat. Hist.* (7) XI, p. 205.
 1904. *Harpactor marginatus*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 332.

Barkuda, 21-vii-14.

Recorded from "North India;" Vizagapatam; Ceylon. Represented in the collection of the Zoological Survey of India from Bengal: Calcutta; Tinpahar, near Rajmahal. Chota Nagpur: Chaibassa. United Provinces: Hardwar and Lucknow. Bombay: Dhoni, Krishna Valley, ca. 2,400 ft.; Beyt, Dwarka, Kathiawar; Uparkot, Janagadh, Kathiawar; Sasan, Kathiawar. Madras: Vizagapatam. South India: Bangalore.

Harpactor squalus, Dist.

1904. *Harpactor squalus*, Distant, *Faun. Brit. Ind. Rhyn.* II, p. 333.

Barkuda, xi-14 and 15—22-vii-16.

Recorded only from Sikkim; Punkabari. Represented in the collection of the Zoological Survey of India from Bengal: Manbhum. Chota Nagpur: Chakradharpur; pass between Chaibassa and Chakradharpur. Orissa: Balugaon and Dhauli, Puri district; Hill above Barkul, Puri district, 0—1,000 ft. Madras: under stone on hill near Rambha, and at Rambha, Ganjam district.

Harpactor fuscipes (Fabr.)

1787. *Reduvius fuscipes*, Fabricius, *Mant. Ins.* II, p. 312.
 1803. *Reduvius fuscipes*, Fabricius, *Syst. Rhyng.*, p. 278.
 1804. *Reduvius sanguinolentus*, Wolff, *Ic. Cim.* IV, p. 166, f. 160.
 1825. *Reduvius corallinus*, Le Pelétier et Serville, *Enc. Méth.* X, p. 279.
 1868. *Reduvius fuscipes*, Stål, *Hem. Fabr.* I, p. 110.
 1891. *Harpactor bicoloratus*, Kirby, *Journ. Linn. Soc. Zool.* XXIV, p. 120.
 1903. *Harpactor fuscipes*, Distant, *Ann. Mag. Nat. Hist.*, (7) XI, p. 205.
 1904. *Harpactor fuscipes*, Distant, *Faun. Brit. Ind. Rhyng.* II, p. 333.

Barkuda, 17—21-vii-14, 15—22-vii-16.

Recorded from Bombay, Bor Ghât; Ceylon. Represented in the collection of the Zoological Survey of India from Bengal: Calcutta; Siliguri; Punkhabari, Darjiling district, and Bombay.

Harpactor varians, sp. nov.

Barkuda, 21-vii-14.

Head, pronotum, scutellum and legs shining black, with some short stiff hairs on the legs and the margins of the pronotum. A spot at the inner margin of each eye, posteriorly, a lateral spot before each eye, a linear spot between the ocelli on disk, and a central longitudinal fascia on the underside of the head, luteous; (these markings are liable to variation); head deeply impressed behind eyes. Antennae light brown, the base of the first joint shining black, its apex and the whole of the second joint dark brown; first joint longest, equal in length to the second and third together, second shortest, third and fourth subequal. Anteocular area of head a little shorter than the postocular.

Rostrum reaching the anterior coxae; the first joint longer than anteocular area of head, equal to the second joint, third joint shortest. Pronotum with the anterior lobe convex, centrally longitudinally sulcate, the anterior angles produced into two short obtuse spines directed slightly backwards; posterior lobe with the disk slightly rounded; the sides depressed, lateral angles rounded and obliquely suberect, posterior margin straight before the scutellum, obliquely ascendant at the sides. Sometimes there are three very pale luteous spots on the disk of the posterior lobe, two on the anterior area and one on the posterior margin. Scutellum with its apex cretaceous-white. Hemelytra very pale luteous, transparent, the inner margin of the clavus slightly fuscous, apical angle of corium longly produced; membrane shining, hyaline. Abdomen above and beneath luteous, the central portion of the disk above dark brown; connexivum with linear brown marks on the third to the fifth segments. Legs with the femora nodulose incrassate.

Length 7-8 millim.

Type No. 3924/H.I. in the collection of the Zoological Survey of India.

Sycanus collaris (Fabr.)

1781. *Reduvius collaris*, Fabricius, *Spec. Ins.* II, p. 380.
 1874. *Sycanus collaris*, Stål, *Ent. Hem.* IV, p. 28.
 1904. *Sycanus collaris*, Distant (part.), *Faun. Brit. Ind. Rhyn.* II, p. 351.
 1910. *Sycanus collaris*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 208.

Barkuda, 15—22-vii-16.

Recorded from Bengal; Ceylon; Malacca. Represented in the collection of the Zoological Survey of India from Bengal: Sahebganj; Darjiling, ca. 7,000 ft., Punkabari, Darjiling district, E. Himalayas. Chota Nagpur: Ranchi. Orissa: Angul. Madras. South India: Teppukadu, Nilgiri hills, 3,000 ft.

Family NEPIDAE.

Laccotrephes griseus (Guér.)

- 1829—1838. *Nepa griseus*, Guérin, *Iconogr. Règne Anim., Ins.*, p. 352, pl. Ivii, f. 7.
 1868. *Laccotrephes maculatus*, Stål (part.), *Hem. Fabr.* I, p. 135.
 1906. *Laccotrephes maculatus*, Distant (part.), *Faun. Brit. Ind. Rhyn.* III, p. 19.
 1910. *Laccotrephes griseus*, Montandon, *Ann. Mus. Zool. Napoli*, III, n. 10, p. 3.
 1910. *Laccotrephes griseus*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 314.

Barkuda, 15—22-vii-16, 25-vii—4-viii-17.

Recorded from Bengal; Madras; Pondicherry; Ceylon; Burma; Malacca; Seychelles; Mahe. Represented in the collection of the Zoological Survey of India from Punjab: Rawalpindi. W. Himalayas: Dharampur Kooa, Patiala State, base of Simla hills; Lobha, Garhwal district. United Provinces: Bhimtal, 4,450 ft.; Kumaon; Gorakhpur; Lucknow; Mowai, Bara Banki; Chukri Mukri, Nepal Terai. Behar: Siripur, Saran. Bengal: Manbhum; Berhampore Court; Calcutta; Durgapur, near Calcutta (sitting on a reed at edge of brackish water canal. *N. A.*); Rajshahi; Siliguri. Orissa: Puri; Satpura, Puri district. Bombay: Bandra; Dhankal, near Helvak, Satara district, 2,400-2,600 ft.; Kathiawar; Porbandar. Madras: south end of Lake Chilka. Cochin State: Kavalai, 1,300-3,000 ft. Travancore: Tenmalai, W. Ghats (west side). Ceylon: Colombo; Pradeniya. Siam: Pak Raw, Tale Sap (in small creek).

In his Appendix Distant states that the difference between *Laccotrephes maculatus* (Fab.) and *Laccotrephes griseus* (Guér.) is that the anterior area of the prosternum in the former is entirely straight and non-tuberculous, while in the latter this area has a strong acute tubercle. I have examined several specimens in the collection of the Zoological Survey of India including one from Lobha and find that the tubercle is present in all of them and there is no specimen agreeing in size with *L. griseus*, which is without this acute tubercle. *L. maculatus*, therefore, does not appear to be represented in this collection.

Ranatra ? filiformis, Fabr.

1790. *Ranatra filiformis*, Fabricius, *Skript. af Naturh. Selsk.* I, i, p. 228.3.
 1794. *Ranatra filiformis*, Fabricius, *Ent. Syst.* IV, p. 64.
 1868. *Ranatra filiformis*, Stål, *Hem. Fabr.* I, p. 135.
 1906. *Ranatra filiformis*, Distant, *Faun. Brit. Ind. Rhyn.* III, p. 21.

A very badly preserved specimen from Barkuda, 15—22-vii-16.

Owing to its bad condition I am not quite sure of the identity of this specimen. Structurally it agrees with the description given by Distant.

Recorded from Quetta; Karachi; Behar; Assam; Sibsagar; Tranquebar; Bombay; Johore; Phillippines.

Family BELOSTOMATIDAE.

Sphaerodema molestum (Duf.)

1863. *Appasus molestum*, Dufour, *Ann. Soc. Ent. Fr.*, 1863, p. 395.
 1863. *Nervinops rusticus*, Dufour, *Ann. Soc. Ent. Fr.*, 1863, p. 399.
 1871. *Diplonychus molestum*, Mayr, *Verh. zool.-bot. Ges. Wien*, XXI, p. 437.
 1871. *Diplonychus subrhombus*, Mayr, *Verh. zool.-bot. Ges. Wien*, XXI, p. 437.
 1906. *Sphaerodema molestum*, Distant, *Faun. Brit. Ind. Rhyn.* III, p. 36.

Barkuda, in small pond in the middle of the island, 15-22-vii-16.

Recorded from Kashmir; Calcutta tanks; Malacca.

Family NOTONECTIDAE.

[All the species represented in the collection are abundant in the pond, but *Anisops niveus* is less so than the other two.]

Anisops sardea, Herr.-Schäff.

1775. ? *Notonecta alba*, Forskål, *Descr. Amin. Orient.*, p. xxiii.
 1837. *Anisops nivea*, Spinoret, nec Fabricius, *Ess. Hem.*, p. 58.
 1851. *Anisops productus*, Fieber, *Rhynchotogr.*, p. 60.
 1852. *Anisops sardea*, Herrich-Schäffler, *Wanz. Ins.* IX, p. 40, f. 904.
 1855. *Anisops natalensis*, Stål, *Ofr. Vet.-Ak. Förh.* XII, p. 89.
 1865. *Anisops productus*, Stål, *Hem. Afr.* III, p. 191.
 1870. *Notonecta nanula*, Walker, *Zoologist*, 1870, p. 2381.
 1904. *Anisops sardea*, Kirkaldy, *Wien. ent. Zeit.* XXIII, p. 114 et syn.
 1906. *Anisops sardea*, Distant, *Faun. Brit. Ind. Rhyn.* III, p. 45.

Barkuda, in small pond in the middle of the island, 16-17-vii-14, 15-22-vii-1916, 25-vii-4-viii-17.

Recorded from Bombay; Burma: Minhla. Widely distributed in S. Palaearctic and Ethiopian Regions.

Anisops niveus (Fabr.)

1775. *Notonecta nivea*, Fabricius, *Syst. Ent.*, p. 690.
 1798. *Notonecta ciliata*, Fabricius, *Ent. Syst. Suppl.*, p. 524.
 1851. *Anisops hyalinus*, Fieber, *Abh. böhm. Ges. Wiss.* (5) VII, p. 482.
 1868. *Anisops ciliatus*, Stål, *Vet.-Ak. Handl.* VII, 11, p. 137.
 1873. *Anisops pellucens*, Gerstaecker, *Van der Decken's Reise*, III, 2, p. 424.
 1895. *Anisops scutellaris*, de Carlini, *Ann. Mus. Civ. Gen.* XXXV, p. 123.
 1899. *Anisops niveus*, Kirkaldy, *Ann. Soc. Ent. Fr.* 1899, p. 105.
 1904. *Anisops niveus*, Kirkaldy, *Wien. ent. Zeit.* XXIII, p. 118.
 1906. *Anisops niveus*, Distant, *Faun. Brit. Ind. Rhyn.* III, p. 46.

Barkuda, in small pond in the middle of the island, 16-vii-14, 25-vii-4-viii-17.

Plea pallescens, Dist.

1906. *Plea pallescens*, Distant, *Faun. Brit. Ind. Rhyn.* III, p. 48.
 1910. *Plea pallescens*, Distant, var. *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 336.

Barkuda, in small pond in the middle of the island, 15-22-vii-1916, 25-vii-4-viii-1917.

Recorded from Bengal: Calcutta (in tanks); Rajshahi. United Provinces: Lucknow. Cochin State: Ernakulam.

Family CORIXIDAE.

Micronecta dione, Dist.

1910. *Micronecta dione*, Distant, *Faun. Brit. Ind. Rhyn.* V (Appendix), p. 348.

Barkuda, 25-vii—4-viii-17.

Recorded from Bengal: Asansol; Calcutta (at light).

Family CICADIDAE.

Terpnosia jenkinsi, Distant, var.

1912. *Terpnosia jenkinsi*, Distant, *Ann. Mag. Nat. Hist.* (8) IX, p. 183.

1916. *Terpnosia jenkinsi*, Distant, *Faun. Brit. Ind. Rhyn.* VI (Appendix), p. 9.

A single male from Ganta Sila hill near Rambha, Ganjam district, Madras Presidency, 22-vii-16.

This specimen agrees structurally with a specimen in the collection of the Zoological Survey of India from Paresnath hill, 4,000-4,400 ft., Bengal (v-1909), identified by Distant, except that it is slightly smaller and narrower. The markings on the body, both above and beneath, although similar in position and shape, are much smaller and narrower, giving the insect a paler appearance. It is probably a pale variety of *T. jenkinsi* and like it there is an abnormality in the tegmen, where there is a distinct small cell at its apical margin between the first and second apical areas, the one on the right tegmen being larger than the one on the left.

[This Cicada is rare on Barkuda, but common on a neighbouring island and on the hill Ganta Sila near Rambha. It is diurnal in habits and always lives amidst a dense growth of trees or shrubs. Its song is very harsh and never prolonged for more than a few minutes at a time. It commonly settles on tree-trunks, on which it is most inconspicuous. The male begins to sing as soon as he is settled, and as a rule flies off to another tree as soon as his song is finished. Although the species was heard daily in July and August, and frequently seen, as it flew from tree to tree, we succeeded in catching only one specimen.]

Family FULGORIDAE.

Dichoptera hyalinata (Fabr.)

1781. *Fulgora hyalinata*, Fabricius, *Spec. Ins.* II, p. 315.

1791. *Fulgora hyalinata*, Olivier, *Enc. Méth.* VI, p. 572.

1800. *Fulgora hyalinata*, Donovan, *Ins. Ind.* t. vii, f. 3.

1818. *Flata hyalinata*, Germar, *Mag. Ent.* III, p. 190.

1834. *Pseudophana hyalinata*, Burmeister, *Handb. Ent.* II (1), p. 160.

1839. *Dichoptera hyalinata*, Spinoret, *Ann. Soc. Ent. Fr.*, 1839, p. 289, t. xiii, f. 3;

1886. *Dichoptera hyalinata*, Atkinson, *Journ. As. Soc. Bengal* LV, p. 23.

1906. *Dichoptera hyalinata*, Distant, *Faun. Brit. Ind. Rhyn.* III, p. 238.

Barkuda, 15—22-vii-16, 25-vii—4-viii-17.

[This species usually rests on the bark of trees, on which it is very inconspicuous. It is not at all rare on Barkuda.]

In one sex, probably the female, the tegmina have, besides the piceous transverse fascia at apices of ulnar veins, another piceous transverse fascia between this fascia and the base.

Recorded from Bengal; Calcutta; Bombay; Bangalore; Ceylon; Tangalla; Andamans.

Family MEMBRACIDAE.

[I doubt whether any species of this family breeds on the island.]

Leptocentrus substitutus (Walk.)

1851. *Centrotus substitutus*, Walker, *List Hom.* 11, p. 605.
 1858. *Centrotus obliquus*, Walker, *Ins. Saund., Hom.* p. 79.
 1858. *Centrotus flexicornis*, Walker, *Ins. Saund., Hom.* p. 78.
 1885. *Leptocentrus substitutus*, Atkinson, *Journ. As. Soc. Bengal* LIV, p. 87.
 1886. ? *Centrotus flexicornis*, Atkinson, *Journ. As. Soc. Bengal* LV, p. 197.
 1886. ? *Centrotus obliquus*, *id. ibid.* LV, p. 197.
 1908. *Leptocentrus substitutus*, Distant, *Faun. Brit. Ind. Rhyn.* IV, p. 29.
 1916. *Leptocentrus substitutus*, Distant, *Faun. Brit. Ind. Rhyn.* VI (Appendix), p. 154.

Barkuda, 15—22-vii-16, 25-vii—4-viii-17.

Recorded from Bengal: Calcutta, Rajmahal. Behar: Bhogaon, Purneah district. Orissa: Puri. Bombay. Madras: Gopkuda Island, Chilka Lake, Ganjam district. S. India: Mysore. Ceylon: Peradeniya, Elephant Pass, Balangoda, Colombo, Yatiantota, Kelan Valley.

[This is a very common insect on diverse plants in many parts of India. On Barkuda I have only seen it on the leguminous shrub *Crotolaria striata*, D. C., and have never succeeded in finding the young, which in other parts of India are usually to be found with the adult.]

Coccosterphus minutus (Fabr.)

1798. *Membracis minutus*, Fabricius, *Ent. Syst. Suppl.*, p. 514.
 1803. *Centrotus minutus*, Fabricius, *Syst. Rhng.*, p. 22.
 1846. ? *Scaphula minutus*, Fairmaire, *Ann. Soc. Ent. Fr.* 1846, p. 495.
 1869. *Coccosterphus minutus*, Stål, *Hem. Fabr.* II, p. 51.
 1885. *Coccosterphus minutus*, Atkinson, *Journ. As. Soc. Beng.* LIV, p. 89.
 1903. *Coccosterphus minutus*, Melichar, *Hom. Faun. Ceylon*, p. 121.
 1908. *Coccosterphus minutus*, Distant, *Faun. Brit. Ind. Rhyn.* IV, p. 71.
 1916. *Coccosterphus minutus*, Distant, *Faun. Brit. Ind. Rhyn.* VI (Appendix), p. 175.

Barkuda, 25-vii—4-viii-17, also one specimen identified by Distant from the Chilka Survey, 21-vii-14.

Stal recorded it from "Tranquebar."

Family JASSIDAE.

[The members of this family are very scarce on this island. I have observed *Eutettix phycitis*, Dist., feeding on *Crotolaria striata*, D. C., but with this exception, the few specimens we obtained flew to light in the evening.]

Thomsoniella porrecta (Walk.)

1858. *Acocephalus porrectus*, Walker, *List Hem. Suppl.*, p. 262.
 1859. *Platymetopius lineolatus*, Motsch., *Étud. Ent.* VIII, p. 114.
 1870. *Hecalus kirschbaumii*, Stål, *Ofv. Vet.-Ak. Förh.* 1870, p. 737.
 1880. *Thomsoniella kirschbaumii*, Signoret, *Ann. Soc. Ent. Fr.* 1880, p. 52, t. i, f. 44.
 1885. *Thomsoniella kirschbaumii*, Atkinson, *Journ. As. Soc. Beng.* LIV, p. 104.
 1903. *Thomsoniella porrecta*, Melichar (part.) *Hom. Faun. Ceylon*, p. 173.
 1906. *Thomsonia lineolatus*, Kirkaldy, *Rep. Exp. Stat. Haw. Plant. Assoc.*, pt. IX, p. 337.
 1906. *Thomsonia kirschbaumii*, Kirkaldy, *Rep. Exp. Stat. Haw. Plant. Assoc.* pt. IX, p. 338.
 1908. *Thomsoniella porrecta*, Distant, *Faun. Brit. Ind. Rhyn.* IV, p. 278.

Barkuda, 25-vii—4-viii-17.

Recorded from Bengal : Calcutta. Behar : Pusa. Burma : N. Shan Hills. Maldive Islands : Minikoi. Ceylon : Peradeniya, Newara Eliya, Puttalam, Negombo, Bandarawella. Phillippines. Queensland : Cairns.

Eutettix phycitis, Distant.

1908. *Eutettix phycitis*, Distant, *Faun. Brit. Ind. Rhyn.* IV, p. 363.

Barkuda, 25-vii—4-viii-19.

Recorded from Bengal : Calcutta. Behar : Pusa ; Purneah. Ceylon : Kandy.

Also three specimens representing three species of Jassidae. They all belong to very minute species which appear to fall into the sub-family Typhlocybinae.